

WMA Work Plan Supplemental Project

County of San Diego Department of Agriculture, Weights and Measures Member of San Diego Weed Management Area (SDWMA)

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Contract Lead Group and contact information:

County of San Diego Department of Agriculture, Weights and Measures (AWM),
Contact: Bob Atkins, Title: Agricultural Commissioner/Sealer,
Phone: 858-694-2749, email: bob.atkins@sdcounty.ca.gov,
Mailing Address: 5555 Overland Ave., Suite 3101, San Diego, CA 92123

Project Manager (contact for reporting and invoicing) and contact information:

Dawn Nielsen, Title: Deputy Agricultural Commissioner/Deputy Sealer
Telephone: 858-694-2775, email address: dawn.nielsen@sdcounty.ca.gov,
Mailing address: 5555 Overland Ave., Suite 3101, San Diego CA 92123

SUPPLEMENTAL PROJECT: Perennial Pepperweed

The San Diego Weed Management Area (SDWMA), founded in 2001, implements and coordinates the eradication of targeted noxious weeds throughout San Diego County. The group is lead by the San Diego County Department of Agriculture, Weights and Measures (AWM). Regulatory agencies, land managers and conservation organizations participate in the SDWMA meetings. SDWMA Stakeholders have developed a plan to control priority weeds within the county. The SDWMA list of priority invasive plants currently includes perennial pepperweed, yellow starthistle, purple loosestrife and spotted knapweed. The loosestrife and the knapweed eradication efforts will be implemented with SDWMA base funding or by SDWMA partners. The pepperweed and the starthistle occur over greater acreage than the other two species. This proposal is a request for funding to help eradicate pepperweed from the County.

Supplemental Project Title: Perennial Pepperweed Eradication in San Diego County

Priority Topic Area Being Addressed (from request for proposal announcement):

This project addresses Priority Topic Area 1) **Eradication**. This project will treat pioneer, outlier and other populations of perennial pepperweed (a “B” rated noxious weed) in San Diego County. A regional map showing all the infestations within the County is part of this work plan. This project addresses Priority Topic Area 3) **Regional Collaboration**. AWM serves a critical function in this collaborative effort by treating small outlier infestations not being treated by other partners in the SDWMA. A map showing the locations of all pepperweed infestations within the county is included as an attachment. This project addresses Priority Topic Area 4) **High Value Site**. The San Dieguito River Park is home to three endangered species: Least Bell’s vireo, Southwestern willow flycatcher, and the Arroyo southwestern toad. Saving these wildland/habitat areas from weed invasion is critical to securing the future of our endangered species. The portion of the River Park infested with pepperweed is a very small area compared to the total area of the River Park. A map showing the location of the pepperweed infestation within the San Dieguito River Park is attached. The San Dieguito River Park includes a trail which will run from the coast to the eastern crest of the county.

Supplemental Project Goal (6 LINES MAX):

To eradicate perennial pepperweed (*Lepidium latifolium*) infestations throughout San Diego County with integrated pest control methods and the assistance of SDWMA Stakeholders. Realistically, with 40 infestations totaling 385 acres within San Diego County a ten year time frame may be required to achieve the goal of complete eradication.

What are the project's long-term benefits and/or region-wide significance (6 LINES MAX):

Perennial pepperweed is extremely invasive and takes over agricultural fields, alters soil chemistry and smothers native wildlands. The San Dieguito River Park which has perennial pepperweed infestations provides recreation for county residents and habitat for wildlife that includes several endangered species. Eradicating this aggressive invader will improve recreational opportunities, the quality of life for residents and protect the astounding biodiversity of the county.

Supplemental Project Objectives and Methods (1/2 page MAX):**Task/Objective 1:**

County Pest Management crews and/or contractors will treat pepperweed infestations left untreated by other SDWMA stakeholders. Perennial pepperweed has proven to be a very resilient plant but progress has been made. In most infestations, the density of the pepperweed has been reduced and three sites are thought to be eradicated. Growth stage of the target plants will be monitored to ensure that application timing is optimum. Treatments will consist of herbicide applications while plants are actively growing. Local research has found combination treatments of Telar/Garlon or Habitat/Aquamaster have provided improved control of the pepperweed in comparison to the use of a single herbicide so; combinations will be used where possible. Supplemental funding from CDFA for perennial pepperweed control will allow AWM staff to monitor sites and ensure that all treatments are strategically focused toward eradication throughout the county.

Task/Objective 2:

Pepperweed has been observed to grow and flower at different times during the growing season. Our experience has shown multiple treatments during the growing season is a good strategy to deal with the multiple growth flushes that occur in the long growing season of San Diego County. AWM is scheduled to receive ARRA Grant funding in 2010 & 2011 for seasonal help which is anticipated to make one or two herbicide treatments per growing season to each of the pepperweed infestations. Supplemental funding from CDFA would allow permanent AWM staff to assist with treatments and insure that a second and possibly a third application are completed each growing season.

Task/Objective 3:

In earlier experiments with prescribed grazing or mechanical removal of pepperweed biomass both in combination with herbicide applications, resulted in an increase in control. Removal of pepperweed biomass in combination with herbicide application will be implemented in selected areas where feasible.

Supplemental Performance measures (1/4 page max):

How will you quantitatively monitor your project? *Distinguish between year one goals versus long term goals following treatment.*

To track eradication success, measurement of the percent cover of the weed inside random quadrats or counting individual plants where feasible will be done. Photo points at

representative control sites are established and periodic photographs will be taken. Experience has shown, in a dense stand of undisturbed pepperweed, that a first time herbicide application will only lessen the density of the pepperweed stand. Subsequent applications provide further thinning of the pepperweed stand. Long term goals will entail complete eradication of pepperweed from the infested areas.